

DOCUMENT RESUME

ED 365 624

SP 034 787

AUTHOR Caruso, Joseph J.; And Others
TITLE Keeping Professional Company: Individual, Group and Collaborative Supervision in a Student Teaching Practicum. A Preliminary Study.
PUB DATE Apr 93
NOTE 44p.; Paper presented at the Annual Meeting of the American Educational Research Association (Atlanta, GA, April 12-16, 1993).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)
EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Collegiality; Cooperating Teachers; Cooperation; Cooperative Planning; Elementary Education; Higher Education; Lesson Observation Criteria; Peer Evaluation; Peer Influence; Preservice Teacher Education; *Student Teacher Attitudes; *Student Teacher Evaluation; Student Teachers; Student Teacher Supervisors; *Student Teaching; *Supervisory Methods; *Teacher Supervision; Teaching Experience

ABSTRACT

The study described in this report examined an attempt to reshape student teacher supervision during the practicum experience by adding a more collaborative dimension. Its purpose was to assess the impact of combination supervision (individual, group, collaborative) on the development of student teachers' perceptions of themselves as teachers, of practice teaching, and of the importance of significant others in the supervisory process; and of their ability to plan for and analyze teaching. The sample consisted of eight early childhood and elementary student teachers, eight cooperating teachers, and two college supervisors. The supervisors worked collaboratively with each other, and they engaged in individual and group clinical supervision of the student teachers. The student teachers did peer supervision in teams of four. The cooperating teachers supervised the student teachers in traditional fashion. Findings indicated that student teachers found the supervisory role of their peers to be significantly more important than the researchers had anticipated; that their ability to critique classroom instruction increased; and that their ability to plan lessons did not significantly improve. While the results of this research are viewed as tentative, there appear to be suggestive evidence to warrant further study. (Contains 28 references.) (LL)

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**Keeping Professional Company: Individual, Group and
Collaborative Supervision in a Student Teaching Practicum**

A Preliminary Study

**Joseph J. Caruso, Ed.D.
Professor and Chair
Education Department
Framingham State College
Framingham, Massachusetts**

**Charles R. Beck, Ph.D.
Associate Professor of Education
Director of Professional Experiences
Framingham State College
Framingham, Massachusetts**

**Claire Z. Graham, Ed.D.
Associate Professor of Education
Education Department
Framingham State College
Framingham, Massachusetts**

**Paper presented at the Annual Meeting of the American
Education Research Association, Atlanta, Georgia
April, 1993**

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Student teaching is largely an individual enterprise as is the supervision of student teachers. To a large extent, student teachers, cooperating teachers and college supervisors plan, carry out, and reflect on their work alone.

Despite the fact the approach to the supervision of teachers called clinical supervision as originally developed by Cogan (1964) and Goldhammer (1966) at Harvard University was primarily a group and collaborative endeavor whereby graduate interns, curriculum specialists, college faculty members, supervision students, and team leaders were integrated into the supervisory effort, clinical supervision (Cogan, 1973) as practiced today is primarily a one-to-one encounter between supervisor and teacher. Its format and process has been substantially modified to the point whereby its effectiveness as a viable method of supervising pre-service (Rust, 1992) and experienced teachers (Glatthorn, 1992; Starratt, 1992) has been seriously questioned.

In the traditional practicum, the supervision of student teachers typically consists of a series of classroom observations and post-observation conferences. Frequently, neither student teacher nor supervisor have adequate time to reflect about the lesson taught or to confer about it. Student teachers learn to prepare for, to cope with, and to recover from these periodic visits from their college supervisors. Although there may be other student teachers in the school in which they teach, opportunities to discuss teaching with them are often limited.

Despite a desire to support students in their development as teachers, college supervisors, pressed by organizational

constraints, often encounter frustration, conflict, and disappointment as they are unable to carry out supervision in ways that might have maximum impact on student growth. Separated from the university, supervisors sometimes work in unfamiliar schools with cooperating teachers with whom they are unacquainted. They have little contact with faculty members on campus and collegueship with school personnel is hard to establish, especially if supervisory visits are infrequent.

Cooperating teachers (Koerner, 1992), unclear of what the expectations are of their role, complain of a lack of communication and support from the university; some, socialize students into a culture of supervision based on notions of supervisor as inspector (Bolin and Panaritis, 1992), remnants of a different era. The traditional supervisory approach to student teachers is simply not as effective, stimulating, or as satisfying as it might be for each of the parties involved.

In recent years, teacher educators have begun to experiment with the pedagogy and organization of teacher education programs, including the practicum (Zeichner, 1992), particularly in light of the national dialogue created in large part by the Holmes Group (1986) and Carnegie (1986) reports which suggested that closer links be established between colleges which prepare teachers and school sites where students practice teach (Winitizky and Stoddart, 1992). A critical aspect of the practicum is, of course, student teacher supervision.

New conceptions of teaching and learning (Nolan and Francis, 1992), the value of collegueship among professionals, and recent

developments in the teaching profession have implications for the supervision of student teachers; in particular, what should the nature of this supervision be, how should it be structured, and who should carry it out?

Teaching and Learning

Shulman (1987, p. 13) describes teaching as a process which begins with "...reasoning, culminates in performances of imparting, eliciting, involving, or enticing, and is then thought about some more until the process can begin again."

Comprehension of subject matter and of purpose is a starting point in his conception of this process; however, he states, "the key to distinguishing the knowledge base of teaching lies at the intersection of content and pedagogy, in the capacity of a teacher to transform the content knowledge he or she possesses into forms that are pedagogically powerful and yet adaptive to the variations in ability and backgrounds presented by the students (Shulman, 1987, p.15)."

The components of this transformation stage include the scrutinization of teaching materials in light of one's comprehension, identifying ways of representing key ideas to students, selecting instructional strategies, and adapting the process to fit the characteristics of the students.

Instruction, the observable performance of a variety of teaching acts follows this transformation stage. Evaluation involves checking for student understanding and assessing one's teaching. Reflection requires looking back at the teaching and

learning that has occurred; and finally, new comprehension involves new understanding of students, of teaching, and of subject. These comprise the remaining four components of Shulman's model. (1987).

Novice teachers may reason their way through this complex process; however, movement from one component to another in this model may not necessarily occur easily or automatically. Opportunities for student teachers to jointly think through the various stages with college supervisors, cooperating teachers, and/or peers could be enormously beneficial to them and could provide them with the support and guided practice that could lead to greater independence and reflection at a later stage of their development.

The sequence of the steps in clinical supervision (Goldhammer, 1969) is well suited to the tasks of assisting student teachers through the process of pedagogical reasoning (Shulman, 1987). These steps consist of establishing the relationship for supervision, the pre-observation conference, the observation analysis and strategy, the conference, and the post-conference analysis. The advantages of the interaction and the relationship with an individual supervisor, as a student teacher considers transformation issues or reflects about what he or she has learned from a teaching episode, might be augmented and maximized, however, by more opportunities for clinical supervision by groups.

Educators are beginning to see the advantages of using both group and cooperative learning strategies with children as well

as with adults. Slavin's (1990) research shows that cooperative learning has positive effects on student achievement particularly when the methods used emphasize group goals and student accountability. Cooperative learning also has positive effects on a host of outcomes other than achievement; including student self esteem, peer support for achievement, internal locus of control, cooperativeness, and liking of class and of classmates.

Many teachers throughout the country are employing cooperative learning techniques with pupils. The use of cooperative learning approaches in the preparation and supervision of pre-service teachers would provide a modeling of instruction that could encourage student teachers to appreciate the value of learning with peers, increasing the possibility that they would use these approaches with their own students and would also be more open to learning together with future colleagues.

Colleagues

Alfonso and Goldsberry (1982, p. 95) describe colleagueship as "...a relationship characterized by collaborative efforts to accomplish common goals. Collaboration implies both mutual involvement in identifying and selecting objectives and mutual responsibility for designing, implementing, and evaluating strategies to achieve these objective."

Cogan (1973, p. 68) viewed supervision as professional company for the teacher.

. ...In collegueship, the teacher and the clinical supervisor work together as associates and equals, and they are bound together by a common purpose. This purpose is the improvement of students' learning through the improvement of teacher's instruction, and it does not diminish the autonomy and independence the teacher should have.

Collegueship might take place among teachers, between supervisors and teachers, and/or among supervisors.

Greater collegiality among teachers has benefits for students, for schools, and teachers themselves. In Little's (1982) classic study of workplace conditions of schools success, she found that successful schools (based on aggregate standardized achievement scores in reading, language arts, and mathematics) were those which provided opportunities for teachers to discuss their classroom practice; to observe and critique each other's teaching; to work together in the design and preparation of curriculum; and to share in the business of instructional improvement. Such schools made greater use of the human resources available.

Teachers also gain from collegueship as they have greater influence on each other when they have opportunities to plan for teaching together and to teach in the presence of others. As a result, they are more likely to experiment with new ideas and methods. Parents, students and teachers increase their confidence in school programs and staff turnover is likely to be lessened in schools where there is greater cooperation among

staff. (Little,).

In recent years, school-based efforts to promote collegueship among teachers have increased as evidenced by the creation of peer coaching programs (Phillips and Glickman, 1991), teacher study groups (Gibboney, 1989), and school change teams (Maeroff, 1993). Although leadership academies, principals' centers and peer-assisted leadership programs (Barnett, 1990) have also been created to, in part, provide opportunities and greater collegueship among school principals who supervise experienced teachers, supervisors of student teachers continue their practice alone. Unfortunately, occasions for discussing their work with others in similar roles, or for carrying out their supervision in the presence of peers are scarce.

Changes in the structure of student teaching supervision in the practicum should address the need for collegueship among college supervisors. Assigning teams of university supervisors to a school or creating teams made up of college supervisors and cooperating teachers, serving in the role of clinical faculty members, would provide supervisors with needed professional companionship as they practice their craft.

Given the benefits of collegueship, the role of school and college supervisors is to create climates and cultures where adults view themselves as part of learning communities (Barth, 1990). College supervisors can contribute to the development of such communities by providing student teachers with opportunities to study teaching together. Such arrangements at the pre-service level have the potential to alter future teachers' perceptions,

attitudes, and expectations for supervision.

Changes of the Profession

Reforms in the teaching profession such as changes in teacher certification regulations, efforts to restructure schools (Corbett, 1990; Lieberman and Miller 1990); and the establishment of new roles for teachers have coincided with a changing supervisory mindscape (Segiovanni, 1985) away from supervisor as inspector and evaluator to supervisor as facilitator and staff developer. This contemporary conceptualization of supervision takes into account the range of human resources within a school who might participate in the supervisory process as well as the importance of teacher involvement and decision making in work related issues, including their own supervision and staff development.

Future teachers will be expected to assume leadership and supervisory roles within the teaching profession as mentors, advisors, researchers, curriculum developers, university clinical faculty members (Meade, 1991) and evaluators of their peers. Experiences at the pre service level in which student teachers have control over their own learning, including their supervision, will make it easier for them to meet this challenge once they enter the profession.

Coincidentally, the classroom is slowly becoming territory that is shared by several teachers. Due to teacher dissatisfaction with the fragmentation of the school day, the trend toward the integration of special needs children in regular classroom settings, and a more flexible interpretation of

federal program guidelines, it is not unusual to see up to four or five adults (i.e. regular classroom teacher, student-teacher, special needs teacher, and teacher aide) in any one classroom at a given time. Student teachers need to be prepared for the changing "landscape" of classrooms in which teaching is more public and where cooperation among peers is required.

New certification regulations (Teacher Certification Publications, 1992) which require a two stage process in order for teachers to become fully certified are based on the notion that teacher development and teacher education takes place over time. During the post baccalaureate segment of teacher education, it is expected that more of the training will be field based, will involve peers in the process, and will require greater collaboration between schools and colleges than now exists.

The process of revising teacher preparation programs to meet standards imposed by new state certification regulations, attempts at school restructuring, the changing nature of the teaching profession, and changing views of teaching and learning have created opportunities for teacher educators and school personnel to reconceptualize the ways in which student teachers and beginning teachers are supervised and supported.

This study examines one attempt at reshaping the supervision of student teachers during the practicum. It was designed to add a more collaborative dimension to the practicum experience.

Purpose of the Study

The purpose of this study was to assess the impact of combination supervision (individual, group, collaborative) on the development of eight student teachers':

- a. perceptions of themselves as teachers;
- b. perceptions of practice teaching;
- c. perceptions of the importance of significant others in the supervisory process as sources of support (college supervisor, cooperating teacher, other student teachers, other cooperating teachers, other college supervisors);
- d. ability to plan for teaching; and
- e. ability to analyze teaching.

Research Hypotheses

This study tested two research hypotheses based on two perception-based and two proficiency-based criterion measures.

First, the student teachers were expected to show significant growth on two perceptual instruments after completing the special combination supervision treatment.

Second, the student teachers were expected to show significant growth on two proficiency-based instruments after completing the special combination supervision treatment.

Sample and Participants

The subjects consisted of a convenient sample of eight student teachers in their senior year at a Massachusetts state

college. The eight subjects had completed all of their teacher preparation requirements with the exception of student teaching. The student teaching practicum consisted of a 14 week assignment in the spring semester of 1992, at a suburban 355 pupil elementary school located near Boston. The group consisted of early childhood and elementary education majors with a medium grade point average of 2.9. Based on their own grade level requests, the principal assigned them to classrooms from the first to the fourth grade.

Other participants included eight cooperating teachers and two college supervisors. Almost all of the cooperating teachers held master's degrees; four had had a course in supervision. They had, on the average, more than 20 years teaching experience and all had worked with student teachers in the past.

The two college supervisors were tenured full-time faculty members who supervise student teachers on a regular basis as part of their teaching responsibilities.

Research Design

A pre-test and post-test design was used with an experimental group.

The study included four criterion measures: two perception-based and two proficiency-based. The first two instruments were designed to detect perceptual changes and the last two were designed to measure proficiency growth resulting from the combination supervision treatment. The test battery took approximately one and three-fourths hours to complete and was

administered before and at the close of the praticum.

1. Supervisory support ranking.

The respondents were asked to rank order the importance of six sources of supervisory support: assigned cooperating teacher, assigned college supervisor, other cooperating teachers, fellow student teachers, the principal, and other college supervisors. The student teachers were asked to rank these six sources of supervisory support with respect to the attainment of specific competencies before and after the special combination supervision treatment. These competencies included: communicating effectively, lesson planning, achieving greater self-confidence, becoming more knowledgeable of subject matter, clarifying teaching and learning objectives, evaluating pupil progress, selecting appropriate teaching strategies and materials, etc. The pretest ranking was based on the student teachers' expectations and the posttest ranking was based on their assessment after having received the treatment.

2. Teacher Attitude Scale

This scale, developed by researchers from The Ohio State University (Williams and Kennedy, 1980), was divided into two parts. Each part was based on a bipolar scale consisting of a six point semantic differential scale administered both before and after the treatment.

The first part examined the respondents' self perceptions as teachers (e.g., secure/insecure). A factor analysis of the instrument yielded the following three factors: Feelings About Self, Commitment, and Characteristics of Person. The second part

examined the respondents attitudes toward student-teaching (e.g., important/unimportant). A factor analysis yielded the following four factors: Teaching Activity, Teacher Education Programs, Requisite for Teaching and Demands for Teaching (Williams and Kennedy, 1980).

3. Lesson Planning Instrument

The respondents were asked to list as many suggestions as they could think of for planning a science lesson. The instrument consisted of 10 basic lesson planning considerations (i.e., lesson objectives, concepts and skills, teaching strategies, etc.). A group of educators, 20 graduate students enrolled in a course in supervision, composed a master list of appropriate answers for evaluating the student teachers' responses. To provide a general focus and consistency, both the pre-test and the post-test lesson focused on higher order mammals as subject matter.

4. Video Analysis Instrument

This instrument was used to critique two videotaped lessons (i.e. one before and one after the practicum). The first part of the instrument asked the respondents to list as many strengths and weaknesses as they could detect in a videotaped lesson taught by a teacher unknown to the respondents. The second part asked the respondents to critique ten lesson categories based on the videotape (e.g. goals and objectives, attention and control, procedures, etc.). A group of 20 graduate students in supervision viewed the videotapes and generated a master list of appropriate answers.

Supervision Model (Treatment)

This was a pilot program in which a cadre of eight students was placed in one school practicum site with two college supervisors. Four of the students were randomly assigned to one supervisor and four to the other; however, the two supervisors worked collaboratively in the following ways:

- a. they developed a joint course syllabus and met together with all student teachers to review common requirements at the opening of the semester;
- b. they met together with all student teachers and their cooperating teachers to review the standards for state certification during the first week of the practicum;
- c. they formally observed and conferred with each other's student teachers once during the semester;
- d. they jointly held group clinical supervision sessions with the eight student teachers; and
- e. they held a joint meeting with the eight cooperating teachers during the last week of the semester to discuss common concerns and issues.

The supervisors carried out individual supervision by formally observing their assigned student teachers three times during the semester and holding a post observation conference with each one. They held mid-term and final three-way evaluation conferences with each of their four student teachers and his/her cooperating teacher.

The two supervisors also facilitated two pre-teaching group lesson planning sessions and two post-teaching group analysis

sessions with the eight student-teachers during the first six weeks of the term.

The group clinical supervision approach had three main phases: pre-teaching group planning, teaching the lesson and individual analysis; and post-teaching group analysis.

Pre-teaching group planning

This was a planning and rehearsal phase in which a selected student teacher brought an idea or topic for a lesson to the group. The role of members of the group was to help the student to clarify the lesson's purpose, to think of instructional strategies, to suggest appropriate materials, to ask questions about the pupils, and to anticipate problems. The students were given a set of guided questions, "Considerations in Lesson Planning" to assist them with the planning discussion. Following each discussion, the student teacher responsible for teaching the lesson in his/her own classroom developed an actual written lesson plan independently.

Teaching the lesson and individual analysis

In this phase, the student teacher taught the lesson which was video-taped by a fellow student teacher. All student teachers attended a workshop to learn how to use the video camera.

The selected student was asked to study his/her teaching carefully in preparation for the group conference which followed, usually a week later. The student's instructions were to view

and analyze the lesson and come to the group prepared to share his/her reflections. The student was also requested to select key portions of the lesson to discuss with the group.

Post-teaching group analysis

Prior to the group's viewing of the video-taped lesson, each student teacher in the group was asked to focus on particular events which took place in the classroom.

Some were assigned the task of observing the children's behavior while others paid special attention to the concepts and skills being taught and the appropriateness of the materials used.

They studied the methods and procedures employed, the sequence of the various parts of the lesson, as well as the socio-emotional aspects of the class. In this way, the supervision labor was divided. They were given the written lesson plan, background information about the pupils in the class, and guided discussion questions to aid them with their analyses.

The student who taught the lesson was asked to take a leadership role during the post-teaching group conference. The student played the videotape, usually commenting on certain children, preparing the group for an important incident, or explaining while he/she used on strategy or another.

Once the tape was shown, the student first offered his/her own analysis of what took place. Following the student's reflections, each group member shared his/her own observations and a discussion ensued.

The role of the supervisors during the post teaching analysis sessions was to serve as facilitators. They asked clarifying questions, offered information, praised, and summarized.

This cycle was repeated once. Just two students taught lessons as a result of these conferences with the two supervisors and eight student teachers.

Peer Supervision

Following the completion of two group clinical supervision cycles with the two college supervisors present and all eight student teachers, the student teachers were divided into two teams of four, with each team having one student teacher who had completed the cycle with the large group.

Based on the clinical supervision model they had experienced, the two teams then carried out the cycle on their own, without either supervisor present, until the remaining three members of their team had an opportunity to experience the clinical supervision phases. In these subsequent group meetings which took place during the second half of the semester, a student assumed the facilitator role formally held by the college supervisor. The purpose here was to enable the students to take charge of their own supervision.

The role of the cooperating teachers

The eight cooperating teachers carried out the supervision of their students in the traditional fashion. They had the

primary responsibility of working with their student teachers on a daily basis. Although they were invited to participate in the group planning and analysis sessions, none did so. Cooperating teachers did, however, permit the video taping to take place in their classrooms. In all cases, they viewed the video taped lesson with their student teacher and offered feedback.

Once during the semester each cooperating teacher also observed another cooperating teacher's student teacher and conferred with that student afterwards.

Results and Conclusions

The results for each of the criterion measures are reported below.

1. Supervisory Support Ranking

Table 1 presents the pretest expectations and Table 2 provides the posttest evaluation for the six sources of supervisory support. The mean and standard deviation for each student was based on how the student ranked each source of supervision in regard to twelve characteristics of effective teaching. Since there were only six sources of supervisory support, the means ranged from a low of 1.0 to a high of 6.0. A high mean indicated that the student considered that source of supervision to be more helpful to the student in acquiring the twelve characteristics of an effective teacher. Figure 1 shows that the fellow student teachers source experienced the greatest increase on the posttest while the school principal source expected the greatest decrease.

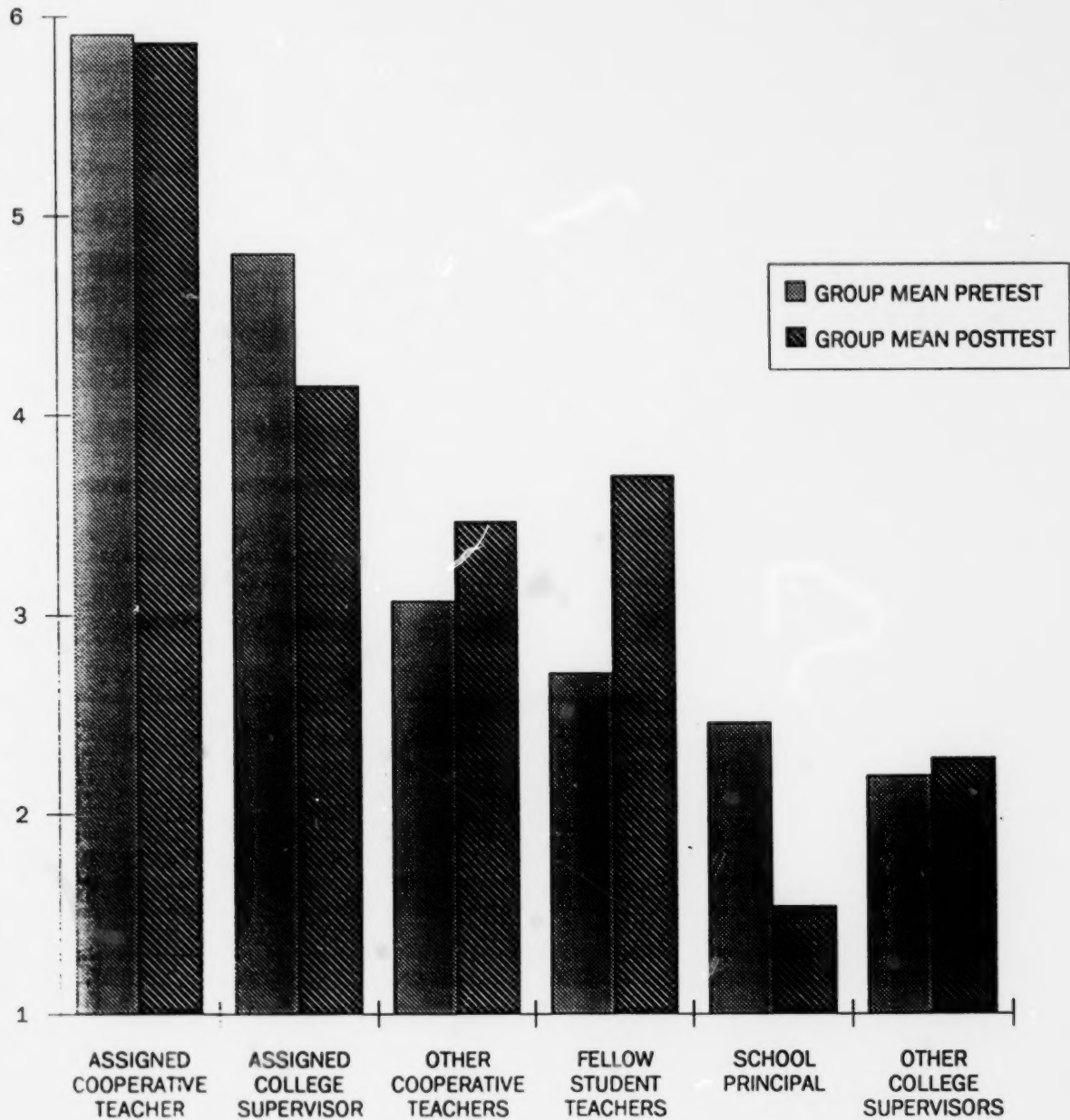
Table 1: Student Teachers' Pretest Expectations for Six Sources of Supervisory Support

		Results for Each Student								
Source of Supervision		1	2	3	4	5	6	7	8	Group
Assigned Cooperative Teacher	Mean	6.0	5.92	6.00	5.92	5.50	6.00	5.92	6.00	5.91
	S. Dev.	0.0	.29	0.00	.29	.67	0.00	.29	0.00	.19
Assigned College Supervisor	Mean	5.0	4.50	4.83	5.00	5.00	4.50	4.67	5.00	4.81
	S. Dev.	0.0	1.09	.39	.43	.95	.52	.78	0.00	.52
Other Cooperative Teachers	Mean	3.0	3.00	3.08	2.58	2.83	3.75	3.25	2.08	3.07
	S. Dev.	0.0	.95	.67	.90	1.27	1.29	1.22	.29	.90
Fellow Student Teachers	Mean	4.0	4.17	2.08	3.33	2.50	1.25	2.92	1.42	2.71
	S. Dev.	0.0	.58	.90	1.07	1.68	.45	1.38	1.00	.88
School Principal	Mean	2.0	1.33	3.67	1.42	2.58	2.75	2.00	3.92	2.46
	S. Dev.	0.0	.49	1.07	1.00	1.56	.97	1.13	.29	.81
Other College Supervisors	Mean	1.0	2.08	1.33	2.92	2.58	2.75	2.25	2.58	2.19
	S. Dev.	0.0	.90	.49	.90	.79	1.14	1.14	.79	.77

Table 2: Student Teachers' Posttest Evaluation for Six Sources of Supervisory Support

		Results for Each Student								
Source of Supervision		1	2	3	4	5	6	7	8	Group
Assigned Cooperative Teacher	Mean	5.92	6.00	6.00	6.00	5.92	5.92	6.00	5.17	5.87
	S. Dev.	.29	0.00	0.00	0.00	.29	.29	0.00	.94	.23
Assigned College Supervisor	Mean	4.67	3.42	3.75	2.75	3.67	4.50	4.83	5.58	4.15
	S. Dev.	.89	1.31	.62	1.36	1.23	1.17	.39	.51	.94
Fellow Student Teachers	Mean	3.42	4.00	2.92	4.00	4.33	3.58	3.83	3.50	3.70
	S. Dev.	.67	1.65	1.08	.85	.49	.79	.72	.52	.85
Other Cooperative Teachers	Mean	3.50	3.00	4.67	4.33	4.00	3.42	2.50	2.33	3.47
	S. Dev.	1.09	.74	.89	.78	.85	1.00	.67	.65	.83
Other College Supervisors	Mean	2.5	2.5	2.67	1.00	1.00	2.58	2.67	3.33	2.28
	S. Dev.	.90	1.17	.65	0.00	0.00	.90	1.07	1.23	.74
School Principal	Mean	1.00	2.08	1.00	2.92	2.08	1.00	1.17	1.08	1.54
	S. Dev.	0.00	1.44	0.00	.51	.29	0.00	.39	.29	.37

FIGURE 1: STUDENT TEACHERS' EXPECTATIONS FOR SIX SOURCES OF SUPERVISORY SUPPORT



A related T test was run on each of the sources of supervision based on the pre-and post-test mean scores. The group means for the fellow student teachers source produced a significant increase at the .05 level, $t(7) = -2.678$, $p = 0.031$. None of the other five sources of support experienced a significant difference based on related T measures of the pre- and posttest results. These results reveal that the fellow student teacher source contributed significantly more to the practicum experience as a source of supervision support than what the students had expected prior to the experience.

The results indicated that the students felt that their fellow student teachers were nearly as helpful as their assigned college supervisor. These results suggest that if student teachers are encouraged to engage in group supervision sessions, that this experience might provide a valuable contribution to the teacher preparation process. However, it should be noted that the absence of a control group makes it difficult to ascertain the contribution of the fellow student teachers.

2. Teacher Attitude Scale

Tables 3 and 4 present the results for the Teaching Attitude Scale: Perceptions of Self as Teacher (Part 1) and Perceptions of the Student Teaching Experience (Part 2). The results of a series of related T tests produced no significant differences for the 15 bipolar choices on Part 1 or for the 10 bipolar choices in Part 2. Figures 2 and 3 indicate rather modest changes for most of the bipolar choices between the pretest and the posttest results.

Table 3: Teaching Attitude Scale Results
(Part I: Perceptions of Self as a Teacher)

Bipolar Choices		Pretest	Posttest
Secure	Mean	4.13	4.50
Insecure	S. Dev.	.64	.76
Committed	Mean	5.25	5.63
Uncommitted	S. Dev.	.71	.74
Active	Mean	4.88	5.25
Passive	S. Dev.	.64	.71
Flexible	Mean	5.25	5.50
Inflexible	S. Dev.	.46	.53
Enthusiastic	Mean	5.38	5.50
Not Enthusiastic	S. Dev.	.52	.53
Well Prepared	Mean	4.88	5.25
Not Well Prepared	S. Dev.	.99	.71
Strong	Mean	4.88	4.75
Weak	S. Dev.	1.13	.71
Clear	Mean	4.75	4.38
Unclear	S. Dev.	1.04	.52
Confident	Mean	4.63	5.00
Not Confident	S. Dev.	.52	.76
Experienced	Mean	3.75	4.38
Inexperienced	S. Dev.	1.39	.74
Sensitive	Mean	5.75	5.63
Insensitive	S. Dev.	.46	.52
Effective	Mean	4.88	5.00
Ineffective	S. Dev.	.35	.53
Involved	Mean	5.38	5.63
Not Involved	S. Dev.	.52	.52
Satisfied	Mean	4.75	5.13
Not Satisfied	S. Dev.	.46	.64
Competent	Mean	5.00	5.25
Not Competent	S. Dev.	.53	.46
Overall Mean		4.90	5.19
Overall Standard Deviation		.50	.44

Note: The higher the mean, on a mean scale from one to six, the more closely the score is associated with the first bipolar choice

Table 4: Teaching Attitude Scale Results
(Part II: Perceptions of the Student Teaching Experience)

Bipolar Choices		Pretest	Posttest
Important	Mean	5.75	6.00
Unimportant	S. Dev.	.46	0.00
Complex	Mean	5.25	5.25
Simple	S. Dev.	.71	.71
Frightening	Mean	4.88	4.25
Not Frightening	S. Dev.	.83	1.04
Challenging	Mean	5.25	4.88
Routine	S. Dev.	.71	.99
Hard	Mean	5.00	4.38
Easy	S. Dev.	.76	.92
Confident	Mean	3.50	4.88
Not Confident	S. Dev.	1.07	.83
Valuable	Mean	5.63	5.25
Useless	S. Dev.	.74	.35
Anxious	Mean	4.75	4.13
Not Anxious	S. Dev.	1.04	.83
Demanding	Mean	5.63	5.25
Not Demanding	S. Dev.	.74	.71
Prepared	Mean	4.88	4.88
Not Prepared	S. Dev.	.64	.83
Overall Mean		5.05	4.98
Overall Standard Deviation		.65	.64

Note: The higher the mean, on a mean scale from one to six, the more closely the score is associated with the first bipolar choice

**FIGURE 2: TEACHING ATTITUDE SCALE RESULTS
PART I: PERCEPTIONS OF SELF AS A TEACHER**

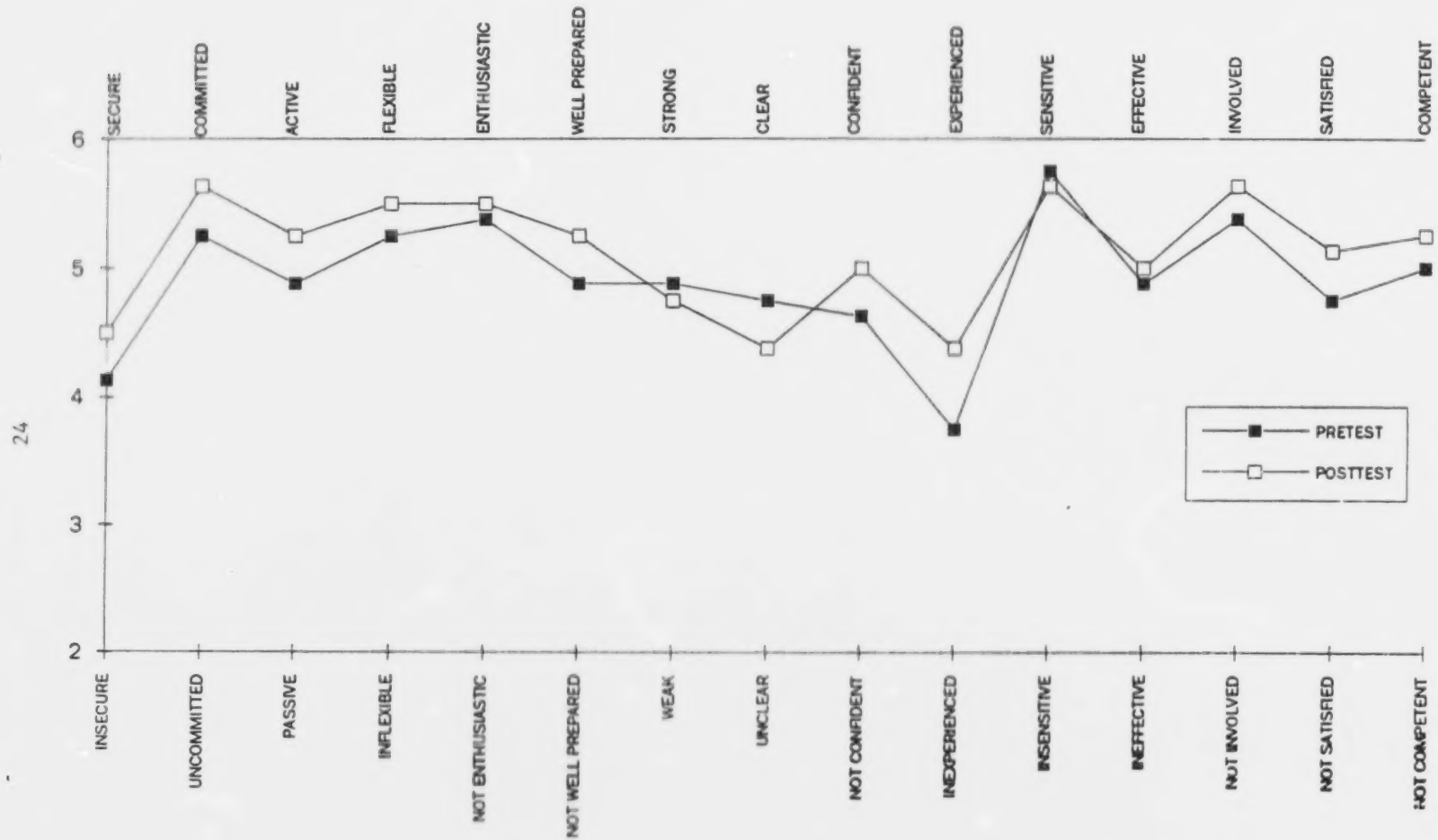
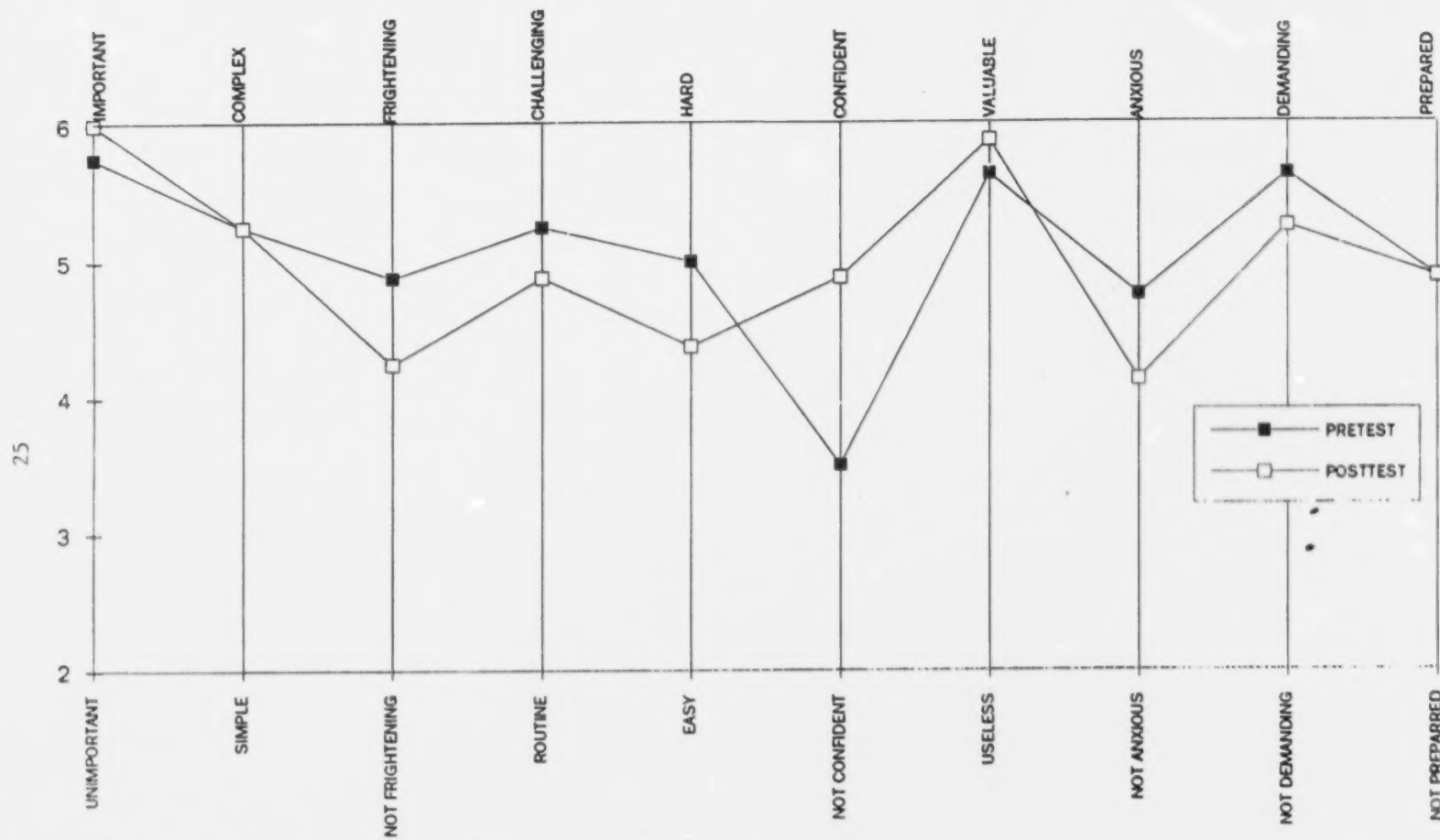


FIGURE 3: TEACHING ATTITUDE SCALE RESULTS
PART II: PERCEPTIONS OF THE STUDENT TEACHING EXPERIENCE



These findings would seem to indicate that the treatment did not produce any significant changes, contrary to research expectations, in teaching attitudes. For example, as a result of the treatment, the students were expected to feel considerably more confident in regard to their self perceptions as teachers. Since most of the rankings on the pretest and posttest were reasonably high, like i.e. a confident attitude, it would appear that this group of students began and ended the treatment with positive attitudes on most of the bipolar choices. A more insecure group of student teachers might have experienced a greater degree of change in their attitudes.

3. Lesson Planning Instrument

Table 5 provides the pretest and posttest results for each of the student teachers on the lesson planning instrument. The scores were derived from the number of appropriate suggestions for the ten lesson planning categories. Three scorers evaluated the students' responses against those of the group of graduate students and averaged the results to determine each of the scores.

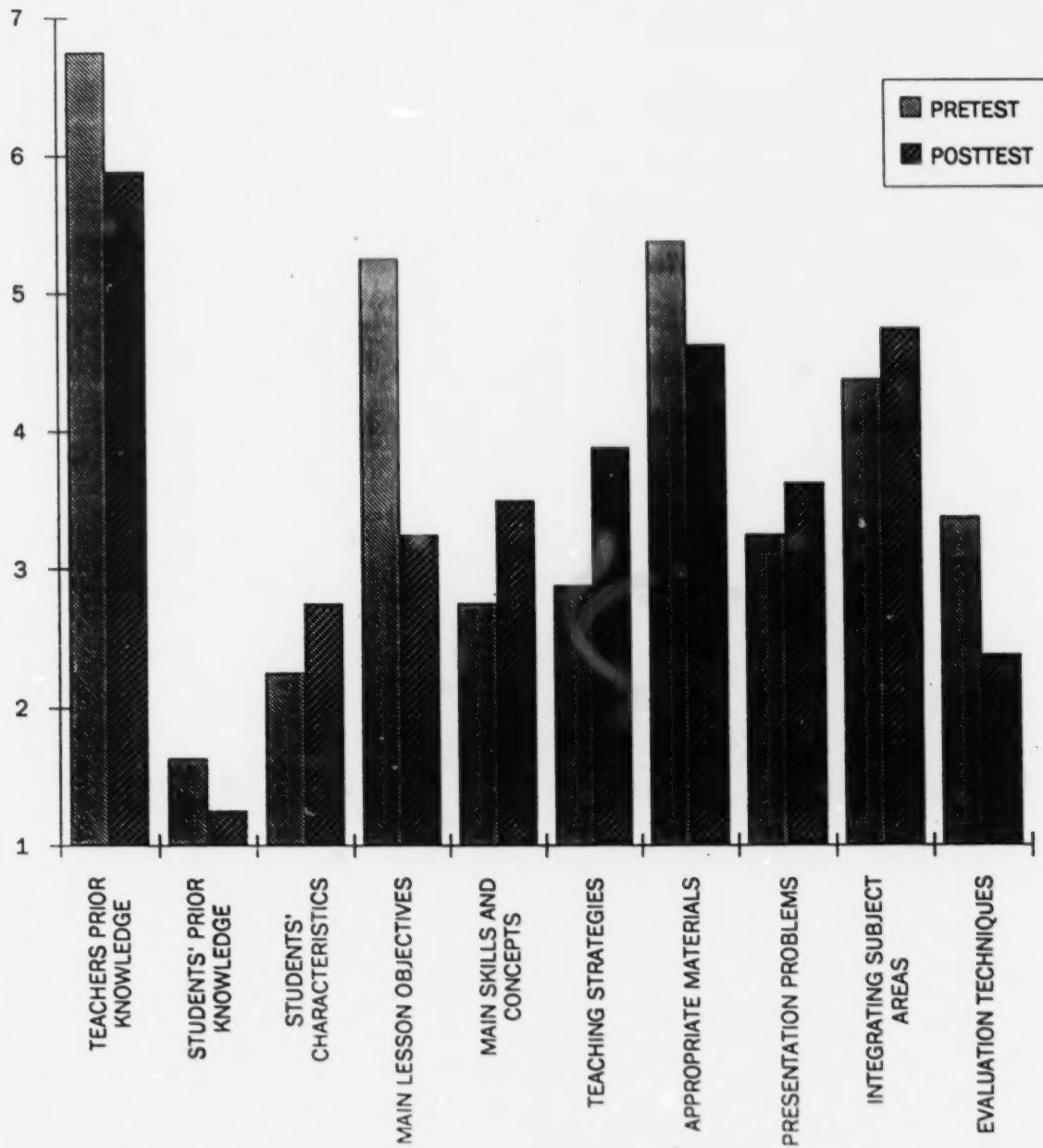
Related T tests were run on the pretest and posttest group means for each of the ten categories. The results of the related T tests failed to produce any significant differences. There was no statistical evidence to indicate that the treatment significantly improved the students' ability to plan lessons based on this instrument. Figure 4 shows that five categories experienced significant gains while five categories experienced nonsignificant losses.

Table 5: Lesson Planning Instrument Results for Pre/Posttests

Category	Test	Results for Each Student									Std. Dev.
		1	2	3	4	5	6	7	8	Group	
Teacher's Prior Knowledge	PRE	3	5	9	10	6	7	7	7	6.75	2.19
	POST	5	6	6	5	4	6	8	7	5.88	1.25
Students' Prior Knowledge	PRE	1	2	0	2	2	1	3	2	1.63	.92
	POST	0	2	0	1	1	2	2	2	1.25	.89
Students' Characteristics	PRE	0	1	2	2	6	5	2	0	2.25	2.19
	POST	1	2	4	2	4	3	3	3	2.75	1.04
Main Lesson Objectives	PRE	3	1	5	9	8	5	4	7	5.25	2.66
	POST	5	1	2	4	3	3	6	2	3.25	1.67
Main Skills and Concepts	PRE	0	1	6	0	4	4	5	2	2.75	2.31
	POST	3	3	3	6	3	4	3	3	3.50	1.07
Teaching Strategies	PRE	3	2	3	1	4	3	3	4	2.88	.99
	POST	5	4	3	3	7	3	4	2	3.88	1.55
Appropriate Materials	PRE	5	4	5	5	9	5	7	3	5.38	1.85
	POST	3	4	6	4	7	4	4	5	4.63	1.30
Presentation Problems	PRE	4	3	3	4	4	5	3	0	3.25	1.49
	POST	0	3	4	4	5	5	3	5	3.63	1.69
Integrating Subject Area	PRE	5	3	5	3	4	6	5	4	4.38	1.06
	POST	3	4	7	6	5	5	5	3	4.45	1.39
Evaluation Techniques	PRE	3	3	5	1	2	5	3	5	3.38	1.51
	POST	1	1	3	1	5	3	4	1	2.38	1.60

Pre and Posttest scores for each subject were derived by averaging the results of three scorers

FIGURE 4: LESSON PLANNING INSTRUMENT RESULTS FOR PRE/POSTTESTS



The researchers can only conjecture as to why the results on the lesson planning instrument did not reflect any significant gains. This finding was a disappointment as the researchers anticipated that the group lesson planning sessions would significantly increase the planning ability of each student.

The results may be attributed to one or more of the following reasons. First, the students may have learned most of their lesson planning skills prior to the supervision treatment. Second, the supervision treatment might have helped the students to plan instruction cooperatively, but not independently. This latter reason suggests that the instrument might not have been appropriate for measuring the results of a group directed treatment. Each of the students, for example, completed the pretest and posttest lesson planning test independently rather than cooperatively.

4. Video Analysis Instrument

Tables 6 and 7 present the results for the video analysis instrument: lesson strengths and weaknesses (Part 1) and suggestions for lesson improvement (Part 2). The scores were derived from the number of appropriate suggestions with regard to overall lesson strengths and weaknesses and on ten specific categories, e.g. classroom management, motivation and lesson conclusion. In Part 1, the related T test results produced a significant increase at the .05 level for lesson strengths: $t(7) = -4.602, p = .003$. In Part 2, there were significant decreases at the .05 level for classroom organization: $t(7) = 4.965, p = .002$ and for attention and control:

$t(7)=3.55$, $p=.009$. In Table 6, the group means indicate that the posttest group ($M=9.38$) outscored the pretest group ($M=3.88$) on lesson strengths. In Figure 5, the bar graph illustrates this dramatic increase in posttest lesson strengths. The group means in Table 7 show posttest decreases in two categories: classroom organization, and attention and control. The bar graph in Figure 6 shows that the posttest scores for these categories were less than half the pretest scores.

The fact that the student teachers listed over twice as many strengths on the posttest is noteworthy considering the fact that the group of graduate students listed nearly twice as many strengths and weaknesses on the pretest master list as opposed to the posttest master list. The student teachers found nearly an equal number of weaknesses on both tests.

These results could have been due to several considerations. First, the student teachers may have become more sensitive to critiquing lesson strengths and weaknesses as a result of the treatment. Second, the student teachers may have had a somewhat different set of criteria from the graduate students for evaluating strengths and weaknesses. Apparently, the posttest had more salient strengths and weaknesses from the student teachers' perspective.

In the case of Part 2, the student teachers listed significantly fewer suggestions for improvement on the posttest in two categories; classroom organization and attention and control. This finding appears to be consistent with the master list composed by the graduate students. The posttest master list

**Table 6: Video Analysis of Lesson Strengths and Weaknesses
(Pre/Posttest Results for Part I)**

Section	Test	Results for Each Student								Group	Std. Dev.
		1	2	3	4	5	6	7	8		
Lesson Strengths	PRE	3	4	1	3	7	6	3	4	3.88	1.89
	POST	6	11	12	12	8	9	9	8	9.38	2.13
Lesson Weaknesses	PRE	8	8	5	12	10	7	10	5	8.13	2.47
	POST	11	9	1	3	8	7	13	9	7.63	3.96

**Table 7: Video Analysis of Suggestions for Lesson Improvement
(Pre/Posttest Results for Part II)**

Category	Test	Results for Each Student								Group	Std. Dev.
		1	2	3	4	5	6	7	8		
Goals and Objectives	PRE	2	3	2	3	1	2	2	2	2.13	.64
	POST	2	1	1	0	2	1	2	4	1.63	1.19
Interest and Motivation	PRE	3	1	1	1	3	2	2	2	1.88	.83
	POST	3	2	2	0	3	3	3	5	2.63	1.41
Lesson Procedures	PRE	4	2	1	1	2	2	2	1	1.88	.99
	POST	3	2	1	1	2	2	3	3	2.13	.83
Problem Solving	PRE	2	2	2	1	3	1	2	2	1.88	.64
	POST	2	2	1	2	1	1	5	2	2.00	1.31
Classroom Organization	PRE	2	2	2	1	2	2	2	2	1.88	.35
	POST	1	0	1	0	0	2	1	1	.75	.71
Communication Skills	PRE	1	3	1	2	2	2	2	2	1.88	.64
	POST	1	1	1	1	3	2	6	4	2.38	1.85
Attention and Control	PRE	4	3	4	1	2	2	4	2	2.75	1.16
	POST	3	2	0	0	0	2	2	1	1.25	1.16
Use of Materials	PRE	2	3	0	1	1	2	3	1	1.63	1.06
	POST	2	2	2	3	3	1	4	2	2.38	.92
Subject Integration	PRE	1	2	3	4	2	3	2	2	2.38	.92
	POST	2	2	4	3	2	3	5	2	2.88	1.13
Conclusion and Evaluation	PRE	0	3	3	1	1	3	4	1	2.00	1.41
	POST	2	2	2	0	2	3	2	2	1.88	.83

FIGURE 5: VIDEO ANALYSIS OF LESSON STRENGTHS AND WEAKNESSES (PRE/POSTTEST RESULTS FOR PART I)

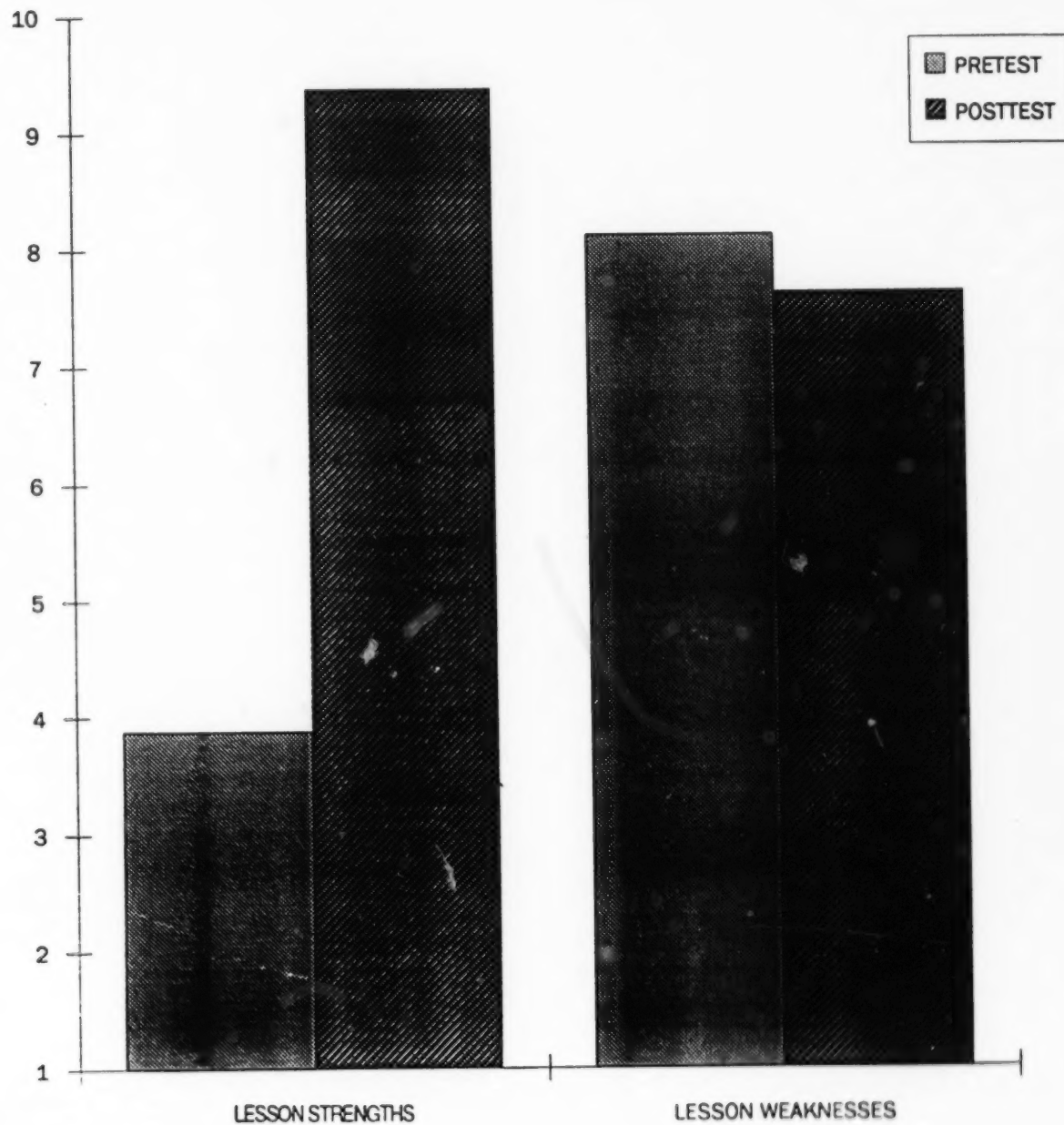
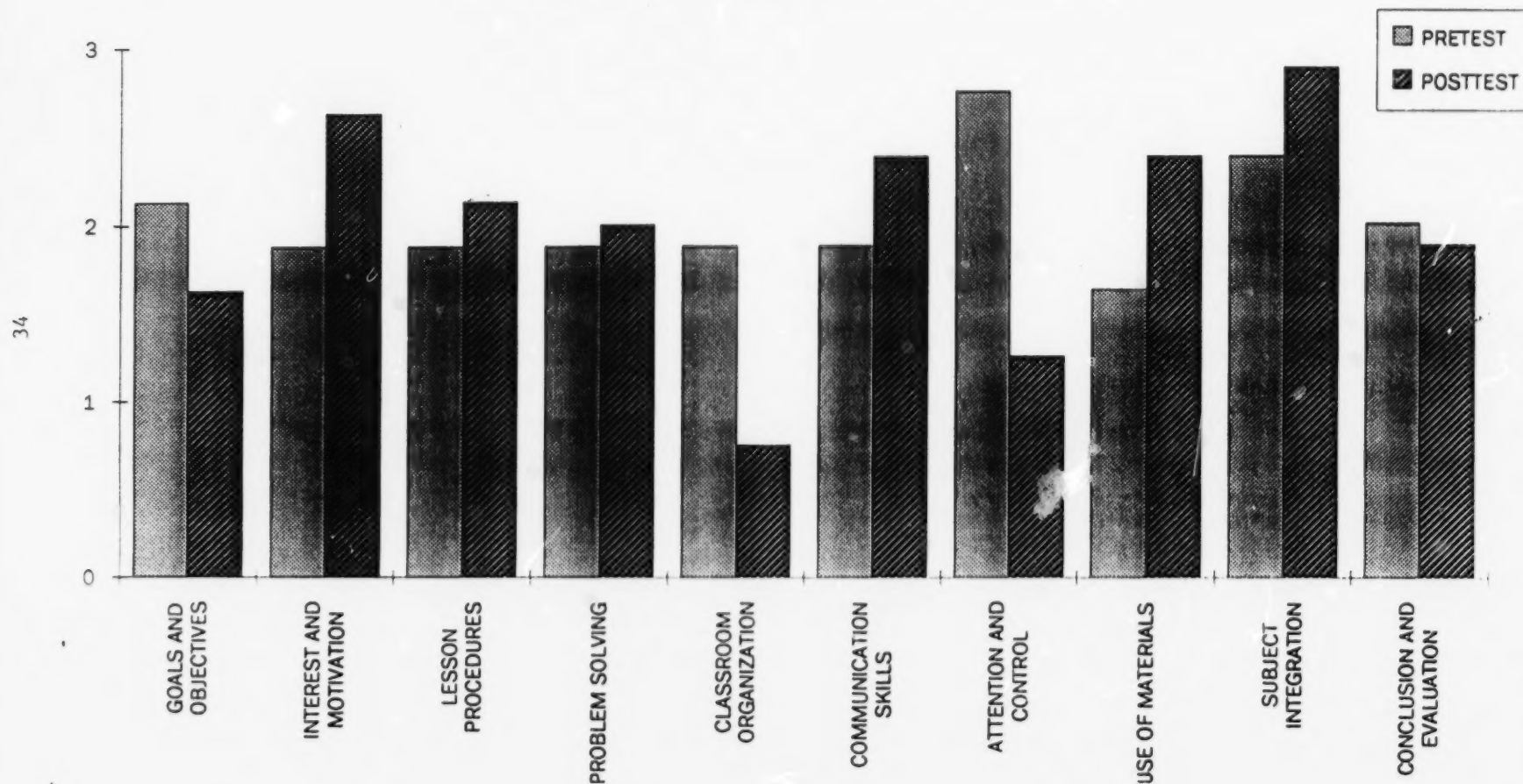


**FIGURE 6: VIDEO ANALYSIS OF SUGGESTIONS FOR LESSON IMPROVEMENT
(PRE/POSTTEST RESULTS FOR PART II)**



also contained far fewer suggestions for improvement in these categories than the pretest master list. The three scorers, who viewed the videotape, believe that the teacher in the post test videotape simply demonstrated more effective management, control, and organizational skills. It should be noted that two different tapes were used for the pre and posttest.

Discussion and Implications

In general, the findings provided some support for each research hypotheses, in terms of perceptual change and proficiency growth, but not as much as the researchers had anticipated. The student teachers found the supervisory role of their fellow student teachers to be significantly more important than they had anticipated. This finding appears to suggest that student teachers value the contributions of their peers and that this interaction might enhance the practicum experience. There is also some evidence to suggest that the student teachers increased their ability to critique classroom instruction as a result of this treatment. However, based on the lesson planning instrument, there is some evidence that the treatment did not significantly improve the student teachers' ability to plan lessons.

The findings are tentative and should be tempered by several considerations. First, the study was based on a limited number of participants. Second, this small sample did not include a control group for determining the effectiveness of the supervision strategies. For example, with the presence of a

control group, it would be possible to determine whether the improvement in critiquing skills would have also resulted from a standard supervision treatment. Finally, the study depended on several instruments that had not undergone previous testing to determine their validity and effectiveness. Since the study included more supervisory interaction, from several sources, than the standard practicum supervision, the criterion measures probably should have included more interactive strategies as opposed to individual responses. For example, measurements based on interviews and group responses might have provided some helpful information for assessing the treatment.

It should be noted that the researchers found a limited amount of validated criterion measures in the area of practicum evaluation. While the sources of supervisory support instrument appeared to provide some useful information, much more exploration and validation are needed to produce instruments that are carefully tailored to the treatment objectives.

While the findings from this preliminary study must remain guarded, there appears to be suggestive evidence to warrant further investigations involving larger samples, a control group, some variations in assessment techniques, including qualitative evaluation methods.

If these tentative results hold up in future studies, they may suggest that changes in the design of pre-practicum and practicum experiences to incorporate more peer group interaction and supervision would be beneficial. These changes would have implications for teaching strategies used in methods courses, for

the placement of student teachers, and for the role of supervisors.

Future studies might address cooperating teachers' perceptions and relationships, the nature of the discourse during the group clinical supervision conferences, aspects of the collegueship developed between the two college supervisors, student teacher satisfaction with supervision and the effects of the combination supervision model on the culture of supervision and the school as a workplace.

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